STATE OF ILLINOIS

ILLINOIS COMMERCE COMMISSION

ILLINOIS DEPARTMENT OF COMMERCE AND ECONOMIC OPPORTUNITY	)	
	)	Docket No. 07-0541
Approval of the Energy Efficiency Portfolio and Plan Pursuant to Section 12-103(f) of the Public Utilities Act.	)	

Direct Testimony of

Philip H. Mosenthal

On Behalf of

The People of the State of Illinois

December 14, 2007

I. Identification and Qualifications

Q. Please state your name and business address.

A. Philip H. Mosenthal, 14 School Street, Bristol, VT 05443.

Q. On whose behalf are you testifying?

A. I am testifying on behalf of the People of the State of Illinois.

Q. By whom are you employed and in what capacity?

A. I am the founding partner in Optimal Energy, Inc., a consultancy specializing in energy efficiency and utility planning. Optimal Energy advises numerous parties including utilities, non-utility program administrators, government and environmental groups.

Q. Please provide a summary of your qualifications and experience.

A. I have 24 years of experience in all aspects of energy efficiency, including facility energy management, policy development and research, integrated resource planning, cost-benefit analysis, and efficiency and renewable program design, implementation and evaluation. I have developed numerous utility efficiency plans, and designed and evaluated utility and non-utility residential, commercial and industrial energy efficiency programs throughout North America, Europe and China.

I have also completed or directed numerous studies of efficiency potential and economics in many locations, including China, Colorado, Kansas, Maine, Massachusetts, Michigan, New England, New Jersey, New York, Quebec, Texas, and Vermont. These studies ranged from high level assessments to extremely detailed, bottom-up assessments evaluating thousands of measures among numerous market segments. Recent examples of the latter are analyses of electric and natural gas efficiency and renewable potential along with development of

suggested programs for New York State, on behalf of the New York State Energy Research and Development Authority (NYSERDA).

Beginning in 1998 I led development of commercial and industrial programs for the Long Island Power Authority (LIPA). I continue to advise LIPA on program design, planning and implementation issues, and have recently been involved in assessment of the achievable electric potential from an expanded portfolio of electric and gas efficiency programs on Long Island.

I was the chief architect and developer of the nation's first "energy efficiency utility," Efficiency Vermont, in the late 1990s, including all planning, program design and analysis, and testimony. I am currently a lead advisor for business energy services at Efficiency Vermont. I also currently advise non-utility parties in the Massachusetts Collaborative on commercial and industrial efficiency planning, program design and evaluation issues, working closely with the utility program administrators in that state.

Prior to co-founding Optimal Energy in 1996, I was the Chief Consultant for the Mid-Atlantic Region for XENERGY, INC. (now KEMA). I have a *B.A.* in Architecture and an *M.S.* in Energy Management and Policy, both from the University of Pennsylvania.

Q. Have you previously testified before the Illinois Commerce Commission ("the Commission" or "ICC")?

A. No.

II. Introduction and Summary of Testimony

Q. What is the purpose of your testimony in this proceeding?

A. My testimony assesses the 2008 – 2010 Energy Efficiency Plans filed by Commonwealth Edison (ComEd), the Ameren Illinois utilities (collectively AmerenCILCO, AmerenCIPS and AmerenIP), and the Illinois Department of Community Economic Opportunity (DCEO). My testimony focuses on the following:

1. The need for an effective independent collaborative process that includes all relevant stakeholders to resolve program design, implementation and evaluation issues and monitor and verify performance.
2. The portfolio of proposed programs, and the need to effectively coordinate between three program administrators and potentially multiple implementation contractors.
3. Monitoring and evaluation, including the issue of deeming savings.
4. Rate impacts and spending caps.
5. The use of "banking" efficiency savings in excess of goals in one year to reduce the future year's goals.

Q. Please summarize your testimony.

A. First, I conclude that ComEd, Ameren and DCEO (collectively the Program Administrators or "PAs") have done a thorough job, using an appropriate planning process, to develop their plans. Overall, the portfolio is a reasonable start, and provides a platform to develop a comprehensive set of effective programs. However, I do have some concerns with the plans in terms of their ability to provide consistent and coordinated initiatives statewide, the allocation of resources

across programs, as well as some of the program design details and administrative strategies.

Second, the success or failure of the PAs will depend heavily on the many detailed decisions that need to be made to flesh out the program designs and implement them. As the PAs have suggested, engaging other stakeholders in a collaborative process is important. Such a collaborative should be structured as an independent, effective and on-going forum for addressing these program details, as well as for addressing monitoring and evaluation (M&E) issues. While I comment on some of the programs designs as presented in the plan, I believe it is appropriate for the ICC to allow program design issues to be worked out through a collaborative process that commences when this docket closes. As such, I do not offer a comprehensive critique of all the program details, nor do I comprehensively review the measure and savings related issues because I would defer to a collaborative process to work out these issues in greater detail.

Third, the PAs' desire to minimize their performance risk inappropriately puts too much of the performance risk on ratepayers. The Illinois Power Agency Act (Public Act 095-0481, hereinafter "The Act" or "legislation") calls for specific levels of performance, and it is incumbent on the PAs to show they have met the targets.[1] I agree that some "deemed" savings, as the PAs suggest, is appropriate.[2]

[1] PA 095-0481 220 ILCS 5/12-103(b).

[2] Central Illinois Light Company d/b/a AmerenCILCO, Central Illinois Public Service Company d/b/a AmerenCIPS, Illinois Power Company d/b/a Ameren IP ("Ameren Illinois Utilities" or "Ameren")Exhibit 2.1, Section 5.4, page 112; Commonwealth Edison (or "ComEd") Exhibit 1.0, Section 5.4, page 117; Ameren Exhibit 4.0, page 34, line 735 ff. ComEd Exhibit 6.0, page 36, line 747 ff.

However, I believe it should be more limited than the PAs propose, and not all evaluation findings should be only prospective. I agree with the PAs that the evaluation budget does not allow all studies one might like to do.[3] However, it is a reasonable allocation, on the low side but well within the typical range of about 3-5% in most jurisdictions, and allows substantial opportunities to focus on those areas of greatest uncertainty in time to inform the performance milestones established by Section 103 of the legislation.[4]

Fourth, I address the spending caps calculated by ComEd and Ameren, and the possibility of amortizing costs over the life of the savings associated with energy efficiency and demand-response programs, similar to investments in supply. This approach would minimize short term rate impacts and/or make additional funds available if necessary.

Finally, I disagree with ComEd's proposal that "banking" efficiency savings from one year to another is appropriate, as explained below.

III. General Program Design, Implementation and Evaluation

Q. Please summarize your recommendations for how specific program design, implementation and evaluation details should be addressed.

A. I agree with the PAs that a collaborative is an appropriate mechanism to work out many of these details,[5] provided that the collaborative allows meaningful involvement by all relevant stakeholders and works toward a goal of reaching consensus on the program details.

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[3] For example, ComEd Exhibit 7.0, line 183ff.

It is not clear exactly what type of collaborative the PAs have in mind, however. It is also not clear whether the utilities are familiar with the benefits that collaborative processes have produced in other jurisdictions, and could produce in Illinois. Indeed, Ameren admits that they "did not review or give consideration to other collaborative processes." See AG Ex. 1.1, Response of Ameren Illinois to the Environmental Law and Policy Center (ELPC) Data Request 2.11.

This simply shows that more work needs to be done soon to work out the details of the collaborative structure, parties and roles. ComEd's proposal to meet quarterly[6] is insufficient to deal with the many program and policy details that need to be addressed, particularly in the first year.

Q Are there examples of effective collaboratives?

A. Yes. Good examples are past or current collaboratives in Connecticut, Maryland, Massachusetts and Vermont. In these collaboratives parties have committed to a process of working closely together to reach consensus on a wide array of issues as an alternative to litigation. They address policy, program design, budget allocation, implementation, and monitoring and evaluation issues.

Q. Do you have any recommendations on the key functions and structure of a stakeholder collaborative?

A. Yes. Collaborative approaches in the Northeast mentioned above provide examples of how stakeholders can work together on demand-side management

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[4] 220 ILCS 12/5-103(b).
[5] Ameren Exhibit 2.1, Section 2.2.2, page 26; ComEd Exhibit, page 12.
[6] Commonwealth Edison Company's 2008 – 2010 Energy Efficiency and Demand Response Plan ("ComEd Plan"), November 15, 2007, ComEd Exhibit 1.0, p. 11.

(DSM) implementation and evaluation as well as what the key functions and structure should be.

Ultimately, the PAs bear responsibility for their plans and actions – and the many decisions that will need to be made after the close of this proceeding to implement the programs needed to comply with the statutory standards. An effective collaborative is a method to involve stakeholders in these decisions and to, whenever possible, avoid or resolve disagreements that might otherwise give rise to litigation. If consensus cannot be reached, collaborative stakeholders should still be free to seek resolution of the disagreement at the ICC or in another forum.

The Illinois collaborative should meet frequently (i.e., every or every other month) to review and discuss program design details as well as discuss regular progress or status reports (e.g., quarterly), implementation issues and approaches, and performance results.

It is important that the Collaborative be independent and facilitated by a neutral party, not by the PAs. The scope must include program design details, analysis of the programs and planning, implementation issues including contractors and procedures, monitoring, verification of savings and evaluation.

Q. Do you recommend the ICC direct PAs to specific implementation methods or design details?

A. No. I believe that flexibility is important. The PAs, with Collaborative agreement, need to be able to modify programs over time based on market conditions and feedback on the effectiveness of their implementation efforts. Ultimately, the ICC's role should be in verifying and ensuring that the goals of the legislation are met, including the net savings achieved and the rate impact caps.

IV. The Energy Efficiency and Demand Response Program Portfolios

Q. Summarize your concerns with the Energy Efficiency program portfolios?

A. As mentioned above, I believe the methods used in developing the portfolios are reasonable. I disagree with the PAs characterization that the savings goals for 2008 – 2010 are aggressive. ComEd states "within four years the level of investment in and harvest of energy efficiency savings will place Illinois second only to California."[7] This is not true in any relative sense. By 2011 the goals are to achieve 0.8% incremental savings.[8] This is well below what many leading states are achieving, and even further below what is achievable. For example, many states in the Northeast and West Coast are at or above about 1% incremental savings, with plans for substantial ramp up over the next few years. Vermont's new goals established by the Public Service Board call for approximately 2% statewide incremental savings in 2008 (VT is currently at about 1.5%) and about 10% savings over just 2 years in "geographically targeted"[9] areas.[10] New York has established a goal of 15% reduction by 2015, or roughly 2% per year starting immediately.[11] Massachusetts is on the verge of passing legislation that will require at least 2% per year.[12] While Illinois ultimately ramps up to similar levels, the PAs have 8 years to

[7] *Ibid*, p. 18.
[8] PA 095-0481, 220 ILCS 5/12-103(b).
[9] "Geographically targeted" areas refer to regions where load reductions can cost-effectively help defer or avoid significant capital expenditures on the transmission and distribution system.
[10] Efficiency Vermont Annual Plan 2007-2008, Prepared for the Vermont Public Service Board by Vermont Energy Investment Corporation, 1 June 2007.
[11] NY Public Service Commission, *Proceeding on Motion of the Commission Regarding an Energy Efficiency Portfolio Standard, Case 07-M-0548*, 16 May 2007.
[12] The Massachusetts House passed HB 3965 155-0 on November 15, 2007. The Senate is currently working on its version and has very broad support. Governor Deval Patrick also supports the bill and has indicated it would pass it.

get there. States such as Vermont have shown they can ramp up much more rapidly to higher levels of savings than is required by the Illinois legislation.

That said, I do recognize that the infrastructure and capability for DSM programs existing now in Illinois is fairly minimal and that it makes sense to start with some straightforward programs while developing the infrastructure and capability for more comprehensive portfolios in the future. As discussed in more detail in the sections that follow, my main concerns are that:

- Programs should be consistent throughout the state as much as possible, and rely on a limited number of contractors to ensure effective and comprehensive treatment of markets and customer service while limiting the number of parties that any customer, trade ally, or design professional would need to engage.
- More resources should be initially focused on those efficiency savings from already planned investments in the market ("lost opportunities"), and less on time-discretionary early retirement strategies ("retrofit").
- I have a number of specific issues with the preliminary program designs. I recognize that the plans are not yet comprehensive – in that many design details are yet to be determined – and that the PAs reserve the right to modify virtually any program design detail. With that caveat, I offer the following program design recommendations (more fully described below), as well as some general comments on the quantitative analysis:

- Residential programs targeted at all-electric customers should better address the primary area of savings potential – namely space heating.
- The PAs should, at a minimum, drop room air conditioners from the appliance recycling program, and should consider droppoing the whole program, or at least dramatically scale it back.
- The PAs should immediately begin planning for implementation of the Residential New HVAC programs to be in place by January 2009 or earlier to capture the opportunities during the spring 2009 cooling season.
- The PAs should immediately implement point of purchase promotions to encourage customers to select efficient appliances, possibly in lieu of the appliance recycling program.[13]
- PAs should consider upstream buydowns rather than coupons for the Residential Lighting Program.
- PAs should implement a commercial and industrial (C&I) new construction program as soon as possible, and should not limit participation to projects enrolled in the U.S. Green Building Council's Leadership in Energy and Environmental Design ("LEED") program.[14]

[13] Note that Ameren does propose a new appliance program, however ComEd does not.
[14] Ameren appears to be limiting participation to only customers pursuing LEED certification. This will likely lead to very high freeridership and ignore the majority of C&I new construction opportunities. Ameren Exhibit 2.1, Section 4, p. 92 (Commercial New Construction Program); Ameren Exhibit 2.0, Line 357ff.

- PAs should consider delaying the start of the retrocommissioning program, and/or consider some modifications to the approach.
- PAs should consider eliminating the Small Commercial CFL retrofit kit, but ensure that commercial customers can participate in the residential retail lighting program.
- PAs should not promote technologies that represent baseline practice or are suboptimal, such as:
  - LED exit signs, except in retrofit situations.
  - Electroluminescent exit signs.
  - Standard T8 fluorescent lighting.

Q. What are your concerns about consistency and coordination and the proposed administrative approach?

A. The experience of other PAs has shown that organizing implementation efforts around program definitions, rather than market structures, lowers the level of participation by customers and efficiency service and product suppliers. Take, for example, a customer who owns a three-story structure in a mixed-use neighborhood with a store on the first floor, leased low-income apartment space on the second floor, and the customer's own apartment on the third floor. That customer is ideally looking for one person to contact to obtain energy efficiency services for the entire building. However, the approach proposed by the PAs could require that customer to engage with different people or contractors to participate in one program for the storefront, a separate program for the leased low-income space, and yet a third program for the residence.

The initial program designs indicate that the PAs will likely send out requests for proposals ("RFPs") to retain the services of implementation contractors for each program, and possibly different contractors for each of the utilities. The PAs do indicate that they will bundle their implementation contracts along the following umbrellas: Business energy solutions (prescriptive and custom incentives), Commercial new construction, Residential appliance recycling, Residential mid- and upstream programs, and Residential energy solutions (all programs aimed at the residence).[15] This arrangement can still result in the need for a single customer or "market channel" (e.g., contractor, distributor, retailer, designer) to work with multiple implementation contractors. For example, a statewide HVAC contractor that installs residential and commercial units might need to work with Ameren's and Commonwealth Edison's separate Residential Energy Solutions (for the Residential HVAC Diagnostics & Tune-Up and Residential New HVAC programs), Business Energy Solutions (for the C&I Custom Incentive, C&I Prescriptive Incentive, and C&I Retro-Commissioning programs), and Commercial New Construction implementation contractors, not to mention DCEO on public sector projects. A statewide electrical distributor supplying residential and commercial markets might have this set of contractors as well as the Residential Mid- and Upstream contractor. A statewide retailer might be working with separate Ameren and Commonwealth Edison Residential Mid- and Upstream contractors to negotiate upstream incentives or buy-downs for residential products.

[15] Ameren Exhibit 2.1, Section 6.2.1, p. 117ff; ComEd Exhibit 1.0, Section 4.2, p. 105ff.

I recommend that, to the greatest extent possible, the PAs organize their contractor selection around functional commonalities – e.g., one contractor to work with HVAC contractors, the same or another contractor to work with electrical contractors and distributors, a separate contractor to work with retailers – rather than aligning these contractors by program. It would also be advantageous for Ameren and Commonwealth Edison to issue joint RFPs by function to promote statewide consistency in program design and implementation. At the very least, the scopes of work should require regular meetings with and coordination across parallel contractors in the two service territories.

In addition to coordination and minimization of multiple contractors working in the same or related markets, PAs should work to resolve any program differences and offer consistent statewide programs. Markets do not neatly separate by utility territory. As a result, offering different incentive levels for the same products, having different rules about minimum qualifying efficiency or installation practices, etc. will create confusion in the market for trade allies, vendors, design professionals and customers with facilities in more than one utility territory.

Q. What are "lost opportunities" in the context of energy efficiency or demand response programs?

A. "Lost opportunities" offer efficiency savings at the time of natural or planned investment in equipment and systems. As a result, they are time-dependent, and if a program does not capture the energy savings, those savings are "lost" until the next planned replacement. For example, if a business buys an inefficient chiller, they will likely use that inefficient chiller for the next 25 years or more. Similarly, a new building that does not adopt efficiency measures at the time

of construction will have poor performance far into the future, and many of the foregone efficiency opportunities may no longer be cost-effective to install until much later.

Q. Why do you recommend a greater focus on lost opportunity programs?

Because retrofit measures are discretionary decisions to retire functioning equipment early, those projects can be undertaken at any time, and can be addressed after the initial ramp-up of the PA programs. Also, retrofit projects generally provide lower long-term savings than their initial savings estimates; the replaced piece of equipment would have been replaced naturally at the end of its useful life, lowering the true savings at that point to the difference between installed equipment and what would have been purchased at that point in the future. For example, the discretionary replacement of a functioning 17-year-old refrigerator today might save 1,900 kWh in the first and some subsequent years; but had that refrigerator failed in two years, it would have been replaced with a unit at least meeting the 1992 Energy Policy Act efficiency requirements. Thus, in the third year, the actual savings from this measure in the refrigerator replacement program would be much less than 1,900 kWh per year. I have not verified whether the quantitative analyses done by the PAs consultant, ICF, has taken these long term effects into account.

In addition, because lost opportunity programs focus on changing decisions at the time of investment, the costs of efficiency are only the *incremental* costs of the high efficiency equipment compared to the standard efficiency equipment. Retrofit measures require expenditure of the full materials and labor cost for an investment that would otherwise not have been made. For example, the extra cost of buying a new efficient central air conditioner (as compared to a standard

efficiency one) might be about $300. However, the full installed cost of a new air conditioner for someone not already planning to purchase one might be $3,000. As a result, lost opportunities should be considered the highest priority.

Q. Is it possible to meet the goals with a focus on lost opportunity programs?

A. Absolutely. Illinois should be able to meet the relatively low 2008 – 2010 goals even without any retrofit programs. For example, Efficiency Vermont ramped up to roughly 1% incremental savings before expanding substantially into retrofit markets. I am not suggesting the PAs should avoid all retrofit markets. Rather, I believe that an initial focus on lost opportunity markets is appropriate, with retrofit markets being addressed later as needed — exactly the reverse of the current plans.

Q. What specific changes do you propose to better promote lost opportunities in the residential sector?

A. For residential programs, I believe promotion of incremental improvements in new appliance purchases is a higher priority and more cost-effective than the retrofit appliance recycling program. While Ameren proposes to do both, ComEd does not propose any lost opportunity appliance program at this time.[16] In addition, I recommend reversing Ameren's allocation of more resources to appliance recycling than new efficient appliances.

There are well functioning programs that promote high efficiency appliances, and in fact the strategies are very similar to the retail CFL promotion

[16] ComEd plan, p. 30.

the PAs plan.[17] Com Ed notes that they will consider adding these later to the CFL program.[18] It is not significantly harder to field appliance promotions than it is to promote CFLs as many of the strategies and retail partners are the same. Given the lost opportunity nature of these resources this should be a higher priority than appliance recycling.

Also, promotion of new appliances generally has significant market transformation benefits. The strategies focused "upstream" in the market *(e.g.,* to retailers, distributors and manufacturers, as opposed to strictly customers) serve to increase stocking, availability, promotion and awareness of the high efficiency equipment; increase market penetrations; reduce incremental costs of efficiency over time; and lead the way for effective codes and standards. Also, many of these appliances (refrigerators, washers, air conditioners, etc.) have relatively long useful lives and therefore provide durable savings.

In contrast, ComEd's appliance recycling program only allows participation by customers with appliances that are at least 16 years old.[19] As a result, most equipment removed will be close to or past its typical lifespan, and any savings captured will be short lived.[20]

Q. What specific changes do you propose to capture lost opportunities in the commercial and industrial sectors?

For commercial and industrial (C&I) programs, it is important that a new construction program begin as soon as possible to avoid losing the efficiency

[17] See for example the Northeast Energy Efficiency Partnership's Residential Lighting and Appliance program that is offered by most of the PAs throughout the Northeast U.S.
[18] *Id.*.
[19] ComEd Plan, p. 46.
[20] This is particularly true for room AC, where typical measure life is often estimated to be 10-15 years. I have not scrutinized the duration of savings PAs propose to claim for this program.

opportunities associated with new buildings. Many jurisdictions have begun and ramped up these programs very quickly. Even though the time from initial design to final construction can be over a year for C&I projects, some savings should result in 2008 from activities already in the works that can adopt incremental changes, and with aggressive implementation C&I new construction programs can be relatively mature by 2010 and capturing a large share of the new construction market.

I disagree with Ameren's plans to target LEED new construction projects.[21] Customers that commit to the LEED program will need energy-efficient design to attain the rating, and a focus on LEED projects will result in a very high level of free-ridership. New construction programs that target a wide range of C&I customers are some of the most common DSM programs, and excellent models exist for the PAs to build on. There is no need to wait until 2009 to begin.

As with the residential sector, C&I new construction programs also offer much more durable savings than retro-commissioning services, which is also difficult to do effectively. Many jurisdictions that have had aggressive DSM for years are only now tackling this market.

Q. Why should the PAs focus on more durable or long lasting efficiency measures?

A. The longer savings last the greater the economic and environmental benefits to ratepayers and Illinois as a whole. The PAs have focused a fair amount of resources on very short lived savings measures such as compact fluorescent lamps,

[21] Ameren Exhibit 2.1, Section 4, p. 92 (Commercial New Construction Program); Ameren Exhibit 2.0, p. 16, Line 357ff.

appliance recycling, HVAC tune-up, and retrocommissioning, while ignoring longer lived measures like new appliances and all-electric home heating measures. By ignoring many of the longer lived measures and focusing on less durable efficiency, the result is that the long term cumulative savings and benefits from the PAs portfolios will be substantially lower than they could be.

Q. Please explain more fully your specific program design concerns.

A. As mentioned above, I am not addressing every possible concern or program design issue. The PAs have noted that they will rely heavily on implementation contractors for detailed designs and reserve the right to modify any of the conceptual designs articulated in the plans.[22] Also, major information such as incentive levels are not provided for all measures. However, based on the conceptual designs that the PAs have provided, I do offer some suggestions set forth below with a general recommendation that these and other details ultimately be resolved by a collaborative process.

Q. Why should residential programs targeted at all-electric customers address space heating?

A. ComEd's and Ameren's plans include two programs specifically targeted to all-electric residential customers — the Multifamily All-Electric Sweep and the Single Family Home Energy Performance.[23] However, these programs are primarily focused on a few inexpensive technologies that do not address the vast majority of the efficiency potential in these buildings.[24] Specifically, ComEd

[22] Ameren Exhibit 2.1, Section 6.2.2, p. 118; ComEd Exhibit 1.0, Section 4.0, p. 107.
[23] ComEd Exhibit 1.0, page 50ff and page 68ff; Ameren Exhibit 2.1, page 37ff.
[24] Note that Ameren does offer more services targeted at space heating for single family, but not multifamily. ComEd should look to Ameren to coordinate these services consistently. *Ibid.*

proposes to install compact fluorescent lamps and some low cost water heating measures such as showerheads and flow restrictors.[25] ComEd does offer an "audit" to customers to recommend other more comprehensive measures, however, little assistance is provided to ensure these will be acted on.[26] What this means is that essentially, customers are left on their own to hire contractors and make improvements. They are unlikely to have sufficient information, handholding and financial incentives to act in large numbers.

It is unclear why ComEd is targeting all-electric customers while ignoring the areas that make these customers unique. In fact, ironically these customers will have the least savings from the primary measure — CFL lamps — of any customers because of the loss of waste heat (from incandescent bulbs) that will have to be made up with electric heat.

Q. What would you recommend as an alternative program for all-electric customers?

A. The PAs correctly note that comprehensive building shell treatment is not generally cost-effective under the Illinois total resource cost test (TRC) guidelines because fossil-fuel benefits can not be counted.[27] However, all-electric customers are the one customer group where this comprehensive treatment is likely to be highly cost-effective and provide customers with greater comfort and large bill savings. Measures should include blower-door guided air sealing, duct sealing, improved insulation, heating system tune-ups, and controls.

Q. What are your concerns about the proposed appliance recycling program?

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[25] ComEd Exhibit 1.0, page 50ff and page 68ff.
[26] *Ibid.*

A. This program will only replace appliances 16 years old or older. Window air conditioners typically have a life of no more than about 15 years,[28] which means that it is unlikely substantial savings from this measure will last very long. In addition, for the relatively small rebate offered, it is unlikely that customers who regularly use their air conditioners would agree to give them up. As a result, many of the air conditioners turned in may be rarely if ever used. Finally, Energy Star new air conditioners can be purchased now for under $100. If customers in fact do use their air conditioners, they will most likely simply replace them with new ones. While this would improve efficiency somewhat, the savings reductions would be far less than the PAs' estimates, which assume complete removal without replacement. Promoting the purchase of Energy Star new air conditioners, as mentioned above, would be far more effective in terms of long term savings.

Q. What changes do you recommend for the proposed appliance recycling program?

A. First, I suggest that the PAs omit removal of room air conditioners as a measure. Even with removal of the room air conditioner measure, the Appliance Recycling Program is likely to suffer from very high freeridership, relatively short lived savings, and high costs. Many customers willing to give up a working refrigerator for $25 are likely to not be actively using it and simply looking for a convenient and inexpensive disposal alternative. Greater focus should be on transforming markets for new equipment.

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[27] ComEd Exhibit 6.0, p. 16-17ff; Ameren Exhibit 4.0, p. 15, line 328ff.
[28] For example, Ameren uses 12 years in its analysis. Ameren Exhibit 2.1, p. B-16.

Q. Please explain your recommendation that PAs consider upstream buydowns rather than coupons for the Residential Lighting Program.

A. ComEd asserts that pursuing a retail coupon program will be faster and easier to set up, and the company may consider moving to an upstream "buydown" approach over time.[29] A buydown approach refers to offering incentives directly to manufacturers or retailers, based on the wholesale costs, that reduce the retail cost of CFLs in the store. This can simplify the transaction for customers who do not have to fill out coupons. Contrary to ComEd's assertion, setting up an upstream buydown approach should be easier, faster, and cheaper than a customer coupon program. Many national chains such as Home Depot already have established mechanisms to participate in these programs in other areas. As a result, Illinois does not have to reinvent the wheel and go through the same learning process that other regions have already been through. In fact, in the Northeast programs have generally shifted from coupon approaches to buydowns simply because they are more effective, easier for consumers, easier for retailers, require lower administrative burdens and cost less.[30]

A buydown approach requires dealing with less parties — a few manufacturers and major national chains that already know how to do these programs and have systems already set up. In addition, many supermarket chains have not participated in retail coupon programs but will participate in upstream buydowns because their systems make it difficult to handle customer point of sale

[29] ComEd Exhibit 1.0, p. 40.
[30] Northeast Energy Efficiency Partnership ENERGY STAR® Products Initiative (www.neep.org/html/ES_Products_index.html).

coupons.[31] Because many consumers buy lights at supermarkets a buydown approach can offer greater participation.

Buydowns are also cheaper for two reasons. First, because the buydown is done upstream, the incentive can be less because it is applied at the wholesale level, rather than at retail. Second, administrative costs are dramatically reduced by eliminating the need for coupon processing.

Finally, buydowns offer another significant advantage in terms of estimating savings. Retailers may provide the PAs with CFL sales data from the prior year which can establish a valid Illinois baseline of market penetration and allow much more accurate estimation of the net effect of the program and Illinois specific net-to-gross ratios. As I discuss below, deeming a net-to-gross ratio for a CFL program based on California data makes no sense because CFL market transformation may be far more advanced in California than in Illinois.

Q. Why do you suggest eliminating the Small Commercial CFL retrofit kit but recommend commercial customers participate in the residential retail lighting program?

A. ComEd proposes mailing 100,000 CFL lamps to small commercial customers.[32] While this is not a bad thing to do, I believe it is not the most effective use of funds for a few reasons:

- Each customer will only receive 2 lamps. The possible CFL opportunities will likely be far greater.

[31] Personal communication with Chris Neme, Director of Planning and Evaluation Services, December 13, 2007. Mr. Neme is an advisor on residential program design for Efficiency Vermont.
[32] ComEd Exhibit 1.0, page 86ff.

- The 2 lamps provided may not be the appropriate size or wattage for the customers needs.
- Because these are unsolicited and may not fit the available applications, this strategy will likely result in a low "in-service" rate — the portion of bulbs that actually get installed. In fact, many of them may end up in the commercial customer's home, rather than business. While this outcome would produce energy savings, it would not provide the same level of savings ComEd would obtain from a business application.
- It does not necessarily provide a strong encouragement for customers to go out and purchase more lamps on their own.

Q. What do you recommend as an alternative?

I propose that all business customers be eligible to participate in the residential CFL program. This approach is used very successfully in VT, where a significant portion of CFL retail sales and savings come from business. Under the coupon approach PAs propose (which, as noted above I don't recommend), PAs can directly and separately track business and residential purchases and assign savings accordingly. With a buydown approach, a survey can be conducted to derive an estimate of the split to better estimate savings. This approach is much cheaper for the PAs and ratepayers, and ensures the bulbs purchased are in fact the style, wattage and size desired by the business. Likely lamp usage and savings will be greater, costs less and markets better transformed.

Q. Please elaborate on your concerns the proposed plans promote baseline or suboptimal technologies.

A. My biggest concern is the promotion of standard T8 lighting technology in the commercial and industrial sector.[33] The PAs propose offering incentives for both standard and high performance (HP) T8s. Standard T8 lighting is a fluorescent system developed in the late 1980s that is more efficient that the old T12 fluorescent systems. It has been widely promoted by DSM programs for C&I markets since approximately 1990. However, in about 2004 HPT8 systems became available that have improved efficiency over standard T8s at relatively little incremental cost. Many programs have transitioned from promotion of standard T8s to HPT8s as a result.[34] HPT8s are widely available, and made by all the major lighting manufacturers.

As a result, standard T8s are now a suboptimal efficiency solution, and in fact are generally baseline practice for virtually all new C&I lighting installations. In fact, some utilities are now finding customers who previously received program rebates for standard T8 retrofits are now applying for new rebates to install HPT8s.[35]

The bottom line is that promotion of standard T8s will result in very little savings, high freeridership, and lost opportunities by not installing the optimum technology at the time of customer engagement.

Q. Are HPT8s widely available?

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[33] See AG Exhibit 1.2, ComEd to AG Data Request 2.3, and AG Exhibit 1.3, Ameren Response to AG Data Request 2.3.

[34] See for example, programs offered by: Efficiency Vermont, Energy Trust of Oregon, Efficiency Maine, Efficiency New Brunswick, California utility programs, Massachusetts utility programs.

[35] For example, in Massachusetts programs have recently moved to limit retrofits to not allow these customers to participate because of budget constraints so they can focus first on replacement of the still existing T12 systems.

A. While HPT8s may not be widely available yet in Illinois, these programs can help promote them and work upstream to ensure they are stocked and available. Efficiency programs should strive to advance markets, rather than promote technologies that offer less cost-effective savings and are already widely adopted. An example that shows availability issues can be overcome rapidly is in New Brunswick. I assisted Efficiency New Brunswick (ENB) last year with development of an upstream HPT8 program. New Brunswick had no existing efficiency programs, and meetings with lighting distributors determined there was virtually no penetration of HPT8 and in fact many distributors were not even familiar with them. I am happy to report that within about 6 months of program implementation ENB believes they have virtually transformed this market such that virtually all new fixtures being sold in NB now come pre-wired with HPT8s.

Q. What other technologies do you believe the PAs should not be promoting?

A. I have not done a comprehensive review of every measure the PAs are considering, nor have they fully identified every possible prescriptive measure they may promote. However, I do have concerns about exit signs.

The PAs propose prescriptive C&I incentives for both LED and electroluminescent exit signs.[36] LED exit signs use about 2 Wt each, and last for approximately 100,000 hours. LED exit signs have achieved widespread adoption and are generally baseline practice in new exit sign installations.[37] However, they still offer substantial retrofit opportunities to replace existing incandescent or CFL

[36] Ameren Exhibit 2.1, page 56; ComEd Exhibit 1.0, page 79.

[37] For example, a C&I new construction baseline study conducted by RLW for Long Island Power Authority in 2001 found 98% penetration of LED exit signs. Anecdotal evidence from discussions with lighting

signs. As a result, I propose the PAs offer incentives for LED exit sign retrofit kits, but not new signs.

My concern with electroluminescent is simply that they are less cost-effective than LED signs. While they use no electrical power, they are quite expensive and generally have had much lower customer acceptance. Given that LED signs offer greater net benefits and require much lower incentives, I believe electroluminescent signs do not need to be promoted with rebates.

V. Monitoring and Evaluation

Q. Do you agree with the PAs proposal to deem savings for the planning period?

A. Not entirely. I do agree it is reasonable to allow some savings factors to be deemed for some measures. However, I believe the PA's proposal unnecessarily shields the PAs from much of the risk and shifts this risk to the customers. I recommend that deeming be more limited, with M&E plans focused to establish some of the most uncertain values in time to inform performance.

Q. ComEd argues that deeming savings limits risk to both it and its customers.[38] Why do you assert that deeming savings shields only the PAs from risk and exposes the ratepayers to greater risk?

A. ComEd is proposing that without deemed savings it is exposed to unreasonable "evaluation risk."[39] However, evaluation itself does not introduce risk. Evaluation is simply the formal assessment of actual performance: it seeks to

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vendors in Vermont indicates most vendors don't even sell compact fluorescent or incandescent signs anymore.

[38] ComEd Exhibit 2.0, p. 46, ll. 1028 – 1032.

[39] ComEd Plan, p. 31.

measure that which is exposed to risk. By deeming savings, the utilities minimize the risk of penalties from poor performance. However, the ratepayers ultimately will pay for the efficiency programs and should be assured they receive the benefits (e.g., energy savings and economic benefits, reduced environmental risks and pollutant emissions, and downward pressure on supply costs.). Underperformance hurts ratepayers.

Q. Do you agree with Com Ed on any aspects of its deemed savings proposal?

A. Overall, I agree with ComEd Witnesses Jensen and Hall that it is reasonable to deem savings where there is a great deal of certainty about savings from past studies and to therefore focus evaluation resources on those areas that are less certain.[40] I also agree that the evaluation budget does not allow for everything to be studied and that it is unreasonable to address all uncertainties within the first three year planning period.[41]

As a result, I agree with ComEd Witness Jensen that deeming the gross savings estimates (kWh and kW) for prescriptive lighting is appropriate.[42] These are generally well evaluated measures: the uncertainty of gross savings is small. I also believe it is appropriate to establish "savings algorithms" and assumptions for many other prescriptive measures. However, I disagree with the PAs' approach to deeming the net-to-gross (NTG) ratios.

Q. Please explain what Net-to-Gross ratios are.

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[40] Ameren Exhibit 4.0, p. 35, line 761ff; ComEd Exhibit 6.0, p. 37, line 772ff.
[41] ComEd Exhibit 7.0, p. 9, line 183ff.
[42] Ameren Exhibit 4.0, p. 35, line 761ff; ComEd Exhibit 6.0, p. 37, line 772ff.

A. As ComEd Witness Jensen explains, net-to-gross ratios generally adjust for two things – freeridership and spillover.[43] Freeriders are customers who participate in a program but who would have installed the efficiency measure anyway.[44] Spillover refers to customers who were influenced by the program to save energy, although did not directly participate in a program. To estimate the net savings (compared to what would have occurred without the program), the gross tracked savings from all the measures installed in the program must be adjusted for these factors.

Q. Why do you believe all NTG ratios should not be deemed?

A. Gross savings from well understood and predictable measures such as a compact fluorescent lamps are fairly certain. They are based on a few factors – essentially the wattage reduction times the hours that they are operating. The former is well established and fairly easy to measure.[45] The latter can vary from one customer to the next, but on average should be similar to facilities in California. In essence, the gross savings are really a function of the technology and average customer, and I do not oppose the PAs' proposal to adopt gross technology savings values based on California data. However, NTG ratios are very different, and much less based on the technology and how it is operated.

ComEd Witness Brandt states:

> "[T]he policy behind deeming NTG ratio values is based on the same logic as deeming the measure savings values. These values

[43] ComEd Exhibit 6.0, p. 26, line 544ff.
[44] Freeriders can also be partial ones who would have captured some portion but not all of the savings without program intervention.

have been evaluated numerous times over several years, and projections of the NTG ratio from these other analyses will provide ComEd with reasonable projections of their expected results. There is not reason to use limited evaluation dollars to conduct new analyses of this data."[46]

I strongly disagree with Mr. Brandt. NTG ratios, unlike gross savings, are very dependent on program design and implementation, and also can significantly change over time and by area. The biggest issue for NTG ratios for most of the programs proposed is freeridership. While gross savings simply counts the savings from all participants in the program, net savings seeks to subtract out those that would have captured the savings on their own in the absence of a program. Freeridership can and is significantly influenced by program design. The PAs propose simply adopting California NTG ratios. ComEd notes:

"Our analysis of program cost-effectiveness is based on net program savings estimated using NTG ratios included in the California Public Utilities Commission Energy Efficiency Policy Manual and the DEER database. These ratios are based on over a decade of evaluated program impacts"[47]

ComEd is correct that California has decades of DSM experience, and a generally more aggressive and comprehensive portfolio of programs than Illinois

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[45] Of course, the wattage reduction depends on what would have been installed in the absence of the efficiency measure (the baseline). As a result, uncertainty is introduced in that for prescriptive measures it is necessary to assume a baseline efficiency. However, this is fairly common practice throughout the industry.
[46] ComEd Exhibit 2.0, p. 46, lines 1019 – 1023.
[47] ComEd Plan, p. 25.

will have from 2008 – 2010. In addition, many of its programs are very mature and have high levels of participation.[48]

These factors make their NTG ratios estimated over a prior period not particularly applicable to Illinois' programs. For example, if CA has an aggressive C&I new construction program that reaches a very large share of the new construction and offers high incentives, their freeridership is likely to be low (and hence NTG would be high). In contrast, with a relatively new C&I new construction program with lower incentives and participation levels, it is likely that a high percentage of participants in the early years would be freeriders.

To illustrate this, imagine that 10% of new construction activity will naturally be efficient in any given year. These customers are highly likely to participate in a program that offers them financial incentives to do something they are already planning on doing anyway. If the program is able to capture 20% participation but all those that had already planned to be efficient apply, then freeridership would be 50% (i.e., 0.1 divided by 0.2). On the other hand, a mature program capturing 50% of the eligible market would only have a 20% freeridership rate (i.e., 0.1 divided by 0.5).

Q. Can program design and administration affect a program's NTG ratios?

A. Absolutely. Program design and implementation decisions can have a significant impact on NTG ratios. For example, in general offering low financial incentives will tend to increase freeridership, while paying more generous incentives will minimize it. Similarly, requiring things like pre-approval and offering comprehensive technical services will tend to minimize freeridership.

[48] Ameren Exhibit 4.0, p. 35, line 761ff; ComEd Exhibit 6.0, p. 26, line 772ff.

Often, capturing participation from freeriders is easier and more expedient than the hard work of truly changing behavior. I do not suggest the PAs would intentionally manipulate programs to increase freeriders. However, they could, and in theory deeming NTG ratios could provide a perverse incentive to do that.

Q. Have you seen instances where program administrators encourage freeridership?

A. Yes. In working with numerous program administrators, I have found instances where decisions were made to encourage freeridership because it allowed the recording and claiming of additional program savings, even though it was clear that actual savings would not be increased. For example, I have seen instances where program staff focus on obtaining completed rebate forms from customers or vendors who have already installed or sold efficient equipment, under prescriptive programs that do not require pre-approval of incentives prior to installation.

Q. Doesn't allowing NTG ratios to be modified retrospectively expose the PAs to unfair risk?

A. I don't believe so. It certainly exposes them to more risk because they won't be able to lock in savings based simply on tracking participation, and run the risk that savings might have to be adjusted downward after evaluation of the NTG ratio. However, the objective here is to ensure Illinois achieves meaningful reductions in electricity usage.[49] It is not focused on simply spending a set amount of money – but on achieving performance. As part of the privilege of implementation, the utilities should be held responsible for showing that they actually did achieve the goals, not simply that they performed specific activities.

Q. Do you agree with the statement that evaluation funds are very limited and they cannot capture results in time to modify their actions?

A. Somewhat. I disagree with ComEd Witness Hall's characterization that 3% of spending on evaluation is unreasonably low and well below other jurisdictions.[50] I have not done a formal survey, however, in my experience 3% is fairly typical, perhaps on the low side. California is a notable exception; California has committed far more resources than any other state to evaluation.

I do agree that not all things can be studied adequately within the 2009 program year, when results would be necessary for any retrospective adjustments to determine whether the PAs should be subject to any penalties for under-performing. However, those areas where there is significant uncertainty can be focused on very early. In fact, for freeridership, evaluators could even begin to study this issue before the end of the first year. In addition, freeridership studies are generally less expensive and take less time than many of the more data intensive billing and metering analyses the PAs seem to envision. I believe the evaluation budget is sufficient to effectively measure NTG ratios for all the important markets, and this represents perhaps the greatest area of savings uncertainty. While 3% may seem small, over the three year planning period, total funds would be approximately $9.25 million (3% of $246 million for ComEd and $62.4 million for Ameren).

For example, properly estimating freeridership for the residential compact fluorescent lamp (CFL) program is critical, because freeridership may be quite

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[49] PA 095-0481, 220 ILCS 5/12-103 (b).
[50] ComEd Exhibit 7.0, p. 9, line 183ff.

high, the market for CFLs is evolving rapidly, and a large portion of the expected savings will come from this program. Ameren itself notes that their portfolio savings estimate is highly sensitive to the NTG ratio for CFLs in both residential and commercial markets (Ameren Ex. 2.1[part 1], p. 146).

On the other hand, low income programs rarely have any freeriders or spillover, so deeming 100% NTG ratios may be entirely appropriate for these savings.

Q. Please comment on the California NTG ratios proposed by the PAs.

A. The California NTG ratios proposed by the PAs are 0.8 for all programs except for the residential appliance recycling program, which suggests 0.35 for refrigerators and 0.54 for freezers.[51]

This is inappropriate. The 0.8 NTG ratio is proposed for virtually the entire portfolio of programs.[52] Assuming the same ratio for a retail CFL program and a direct install low income program makes no sense and clearly ignores the very real differences in these markets and programs. Low income customers rarely make any significant efficiency investments on their own, and as a result have virtually no freeridership. On the other hand, CFL adoption is changing rapidly, and they are becoming much more widely available and promoted by national chains.

Q. What do you suggest as an alternative?

A. As with the program design and implementation details, I recommend the collaborative work out appropriate NTG ratios by program and in some cases by end-use and/or technology within a program. The collaborative can also identify

[51] ComEd Ex. 6.0, p. 42, table.
[52] *Id.*

those areas that are most important to evaluate as well as appropriate evaluation methods and timing. They can agree, if appropriate, to deem some of them and only change them prospectively, while for others it may be appropriate to recognize they are just *a priori* estimates that will be modified when newer information becomes available.

The PAs should also look for evaluation results that may be more appropriate for the proposed programs. These could be from nearby utilities or states or from programs delivered by the PAs themselves in their other service areas (e.g., Ameren's efficiency programming in Missouri).[53] It is surprising to me that the PAs would simply propose adoption of California values (many of which are a few years old), when California experience and current markets are not likely to be all that similar to Illinois. In their own backyard, there are ample studies from places like Wisconsin and the Midwest Energy Efficiency Alliance that would be more appropriate as a first step in estimating NTG ratios for planning purposes, and perhaps in some cases for deeming values.[54]

Q. How do you suggest the PAs manage their portfolios if they don't know ahead of time what NTG ratio they might need to adopt?

A. The energy efficiency plans include fairly thorough discussions about risk management.[55] The PAs note they plan to "over shoot" as a hedge against possible adjustments to savings based on verifications and evaluations.[56] This is an

[53] See AG Exhibits 1.3 to 1.10, Ameren Responses to EPLC Data Requests 2.03, Attachments 1 through 7.
[54] For example, see AG Exhibit 1.9, Ameren's Response to ELPC Data Request 2.03 Attachment 2, Table 6, p. 13, Ameren provides an evaluation of an appliance recycling program they deliver in Missouri. Ironically, this evaluation estimated only 1,038 kWh per refrigerator savings, yet the PAs are asking to deem 1,900 kWh per refrigerator based on the California DEER Database.
[55] Ameren Exhibit 2.1, Section 3.3, page 29ff; ComEd Exhibit 1.0, Section 2.1, page 31ff.
[56] ComEd Exhibit 7.0, line 309ff.

appropriate way to approach this risk. The year 1 and 2 goals are relatively modest (well below what leading states and utilities are currently capturing) and leave plenty of room for hedging. Also, in many cases the PAs would have a full year to ramp up program efforts if they found freeridership was higher than expected. While retroactive adjustments clearly provide less certainty to PAs, the goal should be to capture real savings, and the risk of not performing should fall to the PAs, as they are the ones with the responsibility and authority to deliver the savings.

Q. Should the PAs be required to retroactively adjust savings estimates as a result of evaluation activities?

A. Yes, I believe that in some cases this would be appropriate. As I noted earlier, there is likely to be greater confidence in some deemed savings estimates (e.g., C&I prescriptive lighting, low-income direct install) than in others (e.g., residential CFLs). I believe that the collaborative should determine which deemed savings estimates or factors are most critical to evaluate in the first year or two of program implementation and further agree on which evaluation results will be applied retroactively and which applied only for future program savings determinations.

Q. What evaluation activities do you believe can be accomplished within the proposed three percent budget?

A. I believe there is ample time and budget to estimate virtually all significantly uncertain NTG ratios.[57] Unlike gross technology performance which

[57] I recognize that NTG ratios include effects of spillover as well as freeridership. Spillover tends to build over time as programs transform markets, and also will require greater lag time to measure in many cases. However, in the first few years the programs are at such a low level spillover will be a fairly small factor.

is well understood and relatively stable, NTG factors are affected by many things such as the economy, current market penetrations, program designs and implementation strategies. While it may be appropriate to deem some NTG ratios, I believe the evaluation budgets and timing are sufficient for most NTG ratios to be studied and applied retroactively.

Q. Do you agree with the PA's deemed values?

No, not in all cases. I have not conducted a complete review of all the deemed savings estimates provided by the PAs, but I have noted some examples that appear to be inappropriate, listed below. That said, I believe the most appropriate venue for negotiation of deemed savings estimates is the collaborative, rather than this proceeding.

- The per-lamp savings for CFLs presented by DCEO as part of it's Lights for Learning program appear to be significantly higher than those presented by the other PAs. For example, DCEO states the savings for a 25W CFL as 110 kWh/yr, while Ameren's value is 60 kWh/yr.
- The per-fixture savings estimated for Ameren (Ameren Exhibit 4.0, p. 39) showed greater savings for a standard T8 than a high-performance T8 system with the same baseline (84 watts versus 42 watts).
- The savings estimate for refrigerator recycling is 1,900 kWh per year with a Net-to-Gross ratio of 0.35. An evaluation for AmerenUE

Freeridership will dominate the NTG ratio variability until programs are more fully developed and more focused on future market transformation.

on its Refrigerator Recycling and Rebate Program shows that, despite a program design claim of 1,718 kWh per year, the realized savings were actually 1,038 kWh per year, or 60 percent of the expected value. AG Exhibit 1.4, Ameren Response to ELPC Data Request 2.03 Attachment 2

VI. Cost Recovery and Spending Limitations

Q. What methods of cost recovery have ComEd and Ameren proposed?

A. For the vast majority of spending, the utilities propose to collect all funds from ratepayers contemporaneous with spending, on an annual basis.[58] For a small portion of expenses (e.g., planning costs and demand response equipment), ComEd proposes amortizing costs over a longer period.

Q. Do you have any concerns with that approach?

A. Yes. Amortizing program costs over a longer period of time would minimize rate impacts and allow higher budgets, especially in the early years when budgets may be tight. In fact, ComEd has proposed just this type of amortization for its expenditures on demand response control equipment, recognizing that this investment will produce long term benefits.[59] Energy efficiency resources should be put on an equal footing with supply-side resources, whose cost are generally amortized over the life of the resource. If utilities attempted to recover the entire cost of a supply-side resource in the year it was built, it is unlikely that any power plants would ever be built.

Q. Why is it appropriate to amortize DSM costs?

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[58] See generally Ameren Exhibit 4.0 and ComEd Exhibit 5.0 discussing cost recovery proposals.
[59] Commonwealth Exhibit 5.0, line 178ff.

A. When an investment is made in efficiency measures, the savings accrue for the life of the measure – often 10 years or more. Fully recovering all these costs in the year the expenditure is made unnecessarily increases rates in the short term and, increases the likelihood of hitting the statutory spending caps.

Q. Isn't the method of cost recovery proposed by the utilities fairly common?

A. Yes, especially since the advent of deregulation and the adoption of system benefit charges (also called public benefits funds or public goods funds). However, it is by no means the only method of cost recovery.

Q. Wouldn't amortizing costs and recovering them over a longer period cost the utilities money?

A. No. Utilities can amortize the costs using the appropriate cost of capital interest rate, and thus be made whole over time.

Q. As spending levels climb and then even out over time after ramping up efficiency efforts, won't this erode the benefits of amortization?

A. Yes. Because in say year 10, PAs would be recovering a portion of past efforts as well as current efforts, rate impacts would be similar under an amortization approach. However, ComEd and Ameren have both indicated concern with the early year spending caps and the risk of non-performance. As they gain experience, build capability, and benefit from economies of scale the rate impact caps will become less burdensome. Also, as discussed below, amortization can resolve one of ComEd's concerns about banking savings.

VII. Banking Savings

Q. What is "banking" of savings?

A. ComEd has proposed banking, which it defines as the ability to count any savings in excess of its annual goal toward the following year's goals.[60] For example, if in 2008 ComEd exceeds its target savings by 1,000 MWh, then its 2009 goal would be reduced by 1,000 MWh.

Q. Why do you oppose banking?

A. If the PAs show they are capable of higher performance in a given year, the PAs should have an easier time meeting and perhaps exceeding the following year's goals. Illinois should take advantage of any over-performance by advancing the ramp up to higher goals as fast as possible. The sooner that all cost-effective efficiency savings are captured, the greater the economic and environmental benefits to all Illinoisans.

VIII. Conclusion

Q. Does this conclude your testimony?

A. Yes.

[60] Commonwealth Exhibit 7.0, line 309ff.